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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,117	10/02/2003	Jean-Didier Gayraud	Q77684	6032
23373	7590	01/20/2006		
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER MCKINNON, TERRELL L	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/676,117

Applicant(s)

GAYRARD ET AL.

Examiner

Terrell L. Mckinnon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 9-24 is/are rejected.
- 7) ☒ Claim(s) 3-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

Receipt is acknowledged of applicant's amendment filed January 4, 2006. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. Claims 1-24 are pending and an action on the merits is as follows.

Applicant's arguments with respect to claims 1, 2 and 9-24 have been considered but are moot in view of the new grounds of rejection.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2 and 9-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins et al. (U.S. 5,271,582) in view of Eninger et al. (U.S. 5,036,905).

Perkins discloses a heat exchanger for satellites comprising:

- a satellite having a support structure (36) that includes a heat transfer system electronic module's (50) at least one heat transfer means (58) for transferring heat dissipated by the electronic module;
- connector means (56) for connecting the transfer means to the heat transfer system of the structure in such a manner as to

enable the supply of heat exchange fluid to the transfer means and the transfer of heat dissipated by the electronic module to the radiator (24);

- a plurality of transfer means and a plurality of connector means adapted to be connected to a corresponding plurality of heat transfer systems with their own specific power dissipation capacity and temperature range regulation capacity (column 7, lines 55-67; and column 8, lines 65 through column 9, line 15);
- connecting means for connecting it to signal transport means situated in the structure and adapted to convey an electrical power supply providing various voltages for the equipment, and/or service module signals such as those for acquiring telemetry from the equipments, for controlling the equipments, time references, and frequency references, and/or payload signals such as microwave, optical and digital signals;
- a cross-connect unit for payload signals, a service module subsystem, a power supply subsystem, the latter being respectively connected to the signal transport means (Figs. 7-13);
- the cross-connect unit includes means for statically or dynamically programming the module;
- an evaporator assembly comprising at least one tube for supplying the assembly with heat-exchange fluid in the liquid

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state;

- the structure is provided with mechanical, thermal and electrical connection means adapted to connect a plurality of radiators;
- each radiator is capable of being associated with a group of equipments corresponding to a specific temperature and therefore necessitating appropriate cooling;
- wherein the module fluid conduit is provided at a position proximate the electronic module; and
- the module fluid conduit has a common surface with the electronic module.

Perkins's invention fails to show the main fluid conduit has a locking device that shuts off the fluid connection between the module fluid conduit and the main fluid conduit.

3. However, Eninger teaches the use of valve devices [(Fig. 1) under label heat source evaporators (13)] for shutting off the fluid connection.

Given the teachings of Eninger, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the cooling system of Perkins with the main fluid conduit having a locking device that shuts off the fluid connection between the module fluid conduit and the main fluid conduit.

Doing so would provide a safe and reliable means of connecting the fluid modules to the heat transferring system.

***Allowable Subject Matter***

4. Claims 3-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed January 4, 2006 have been fully considered and are found to be persuasive. However, a new non-final rejection has been noted as stated above.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell L. Mckinnon whose telephone number is 571-272-4797. The examiner can normally be reached on Monday -Thursday and every other Friday.

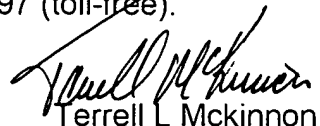
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Blau can be reached on 571-272-4406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Terrell L. McKinnon  
Primary Examiner  
Art Unit 3753  
January 18, 2006